



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,906	12/16/2003	Byung-Seok Soh	Q77082	3892
23373	7590	07/16/2007		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER APANIUS, MICHAEL	
			ART UNIT 3736	PAPER NUMBER
			MAIL DATE 07/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/735,906	Applicant(s) SOH ET AL.	
	Examiner Michael Apanius	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/6/2007 has been entered. The amendments to claims 1 and 11 and the addition of new claims 19 and 20 are acknowledged.

Drawings

2. Figures 1A and 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
3. The drawings are further objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "35" in figure 3A, "45" in figure 4A, "55" in figure 5, "64" and "65" in figure 6B, "601", "603", "604", "704" and "705" in figure 7A and "704", "705", "801", "802", "803" and "804" in figure 7B.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al. (US 6,380,923) in view of Ishikawa et al. (US 6,261,247).

7. Fukumoto discloses an apparatus and method for detecting finger-motion in a wireless manner comprising:

a finger-motion detecting unit (R11-R15 in figure 1), which is configured to be attached to a user's finger, is operated using a battery (column 5, lines 39-42) and is configured in the form of a switch (column 5, lines 42-48), and is adapted to generate a finger-motion signal when the switch is turned on;

a finger-motion signal transmitting unit (the radio wave equivalent to LD1-LD5 in figure 2; see column 10, lines 31-34), which is operated using the battery, receives the finger-motion signal provided from the finger-motion detecting unit, modulates the finger-motion signal to have information on which finger is moved (column 6, lines 20-25), and transmits (the radio wave equivalent to the "LIGHT" in figure 2; see column 10, lines 31-34) the modulated finger-motion signal in a wireless manner; and

a finger-motion signal receiving unit (WT1), which receives and reads the modulated finger-motion signal provided from the finger-motion signal transmitting unit to determine which finger is moved,

wherein the finger-motion signal transmitting unit and the finger-motion signal receiving unit are configured to be attached to the user's hand (see figure 1).

8. The method steps of claim 11 are similarly met as noted above. However, Fukumoto does not expressly disclose a wireless power signal as set forth in claims 1 and 11 or step (a) as set forth in claim 11.

9. Ishikawa teaches using a wireless power signal to power transponders for the purpose of eliminating the need for batteries and the space requirements associated therewith (column 5, lines 6-8). In particular, Ishikawa teaches outputting a wireless power signal (connection between 903 and 922 in figure 9) from a receiving unit and operating a transponder with the wireless power signal. Ishikawa further teaches converting a predetermined wireless power signal into a predetermined amount of power (column 11, line 66 - column 12, line 2).

10. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used a wireless power signal as taught by Ishikawa in the apparatus and method of Fukumoto in order to eliminate the need for batteries and the associated space requirements.

11. In regards to claim 2, Ishikawa further teaches a coil unit (including 903) which generates a predetermined amount of power and outputs data to a receiving unit. Fukumoto discloses a control unit (see R11-R15 in figure 2) that temporarily stores a finger-motion signal inputted from the finger-motion detecting unit, and converts the finger motion signal into the modulated finger motion signal.

12. In regards to claims 3 and 12, Ishikawa teaches converting an alternating current power generated by the coil unit into a direct current power to generate the predetermined amount of power (column 11, line 66 - column 12, line 2).

13. In regards to claims 4 and 13, Fukumoto that each finger-motion signal has a predetermined frequency depending on which finger is moved (column 6, lines 20-25).

14. In regards to claim 5, the finger-motion detecting unit and finger-motion signal transmitting unit of Fukumoto are configured in the form of a ring that is wrapped about a finger. Therefore, the coil unit is configured to be wound about a finger and the control unit is configured to be positioned on top of the finger.

15. Claims 7-10 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al. (US 6,380,923) as modified by Ishikawa et al. (US 6,261,247), as applied to claims 1-5 and 11-13 above, and further in view of Grimes (US

Art Unit: 3736

4,414,537). Fukumoto as modified by Ishikawa does not expressly disclose the various switch configurations set forth in claims 7-10 and 15-18. Grimes teaches switches that are configured to be mounted on a predetermined joint of the user's finger, the end of the user's finger and between adjacent fingers such that the switch is activated by the user flexing a joint, tapping, and/or contacting with another finger and/or thumb (paragraph bridging columns 1 and 2). The configuration of switches of Grimes is easy to use (column 2, lines 44-49) and is efficient for data generation (column 2, lines 39-43). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used switches mounted on a finger joint, end or side as taught by Grimes in the apparatus and method of Fukumoto as modified by Ishikawa in order to allow easy and efficient data generation.

16. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al. (US 6,380,923) as modified by Ishikawa et al. (US 6,261,247), as applied to claims 1-5 and 11-13 above, and further in view of Kaplan (US 2004/0169638). Fukumoto as modified by Ishikawa does not expressly disclose an RFID chip. Kaplan teaches the use of an RFID system as an alternative well-known transceiver attached to a finger of a user as a computer input device (paragraph 38). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used an RFID chip and system as taught by Kaplan in the apparatus and method of Fukumoto as modified by Ishikawa because it is well-known in the art to substitute alternative components that perform the same function. In this

case, the radio wave communication disclosed by Fukumoto and RFID system as taught by Kaplan are both equally suited to wireless communication in a computer input device.

Response to Arguments

17. Applicant's arguments with respect to the previous prior art rejections have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Xiong (US 2003/0214481) discloses a finger worn and operated input device.

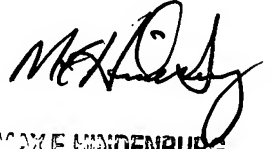
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Apanius whose telephone number is (571) 272-5537. The examiner can normally be reached on Mon-Fri 8am-4:30pm.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3736

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MA


MAX F. MINDENBURG
SENIOR PATENT EXAMINER
EBC CENTER 3700